

IN THE CLAIMS

Please amend the claims as follows:

1. (Previously Presented) A cleaning solution for removing a byproduct derived from a decomposed substance of a process gas containing C and F, and deposited on a component in a process chamber of a semiconductor processing apparatus for subjecting a target substrate to a semiconductor process with the process gas, the cleaning solution comprising N-methyl-2-pyrrolidone, ethylene glycol monobutyl ether, a surfactant, and water; and wherein the surfactant contains fluorine and a total content of the N-methyl-2-pyrrolidone and ethylene glycol monobutyl ether is 80 to 90 wt%, and a ratio of a content of the N-methyl-2-pyrrolidone to the total content of the N-methyl-2-pyrrolidone and ethylene glycol monobutyl ether is 0.75 to 0.95.
2. (Cancelled).
3. (Previously Presented) The cleaning solution according to claim 1, wherein the water concentration is 5 to 20 wt%.
4. (Previously Presented) The cleaning solution according to claim 1, wherein the surfactant concentration is 0.1 to 1.0 wt%.
5. (Cancelled)
6. (Cancelled)

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7. (Currently Amended) A cleaning method for removing a byproduct derived from a decomposed substance of a process gas containing C and F, and deposited on a component in a process chamber of a semiconductor processing apparatus for subjecting a target substrate to a semiconductor process with the process gas, the method comprising:

removing the component from the process chamber; and
dipping the component in a bath of a cleaning solution comprising N-methyl-2-pyrrolidone, ethylene glycol monobutyl ether, a surfactant, and water;
wherein, in the cleaning solution, a total content of the N-methyl-2-pyrrolidone and ethylene glycol monobutyl ether is 80 to 90 wt%, and a ratio of a content of the N-methyl-2-pyrrolidone to the total content of the N-methyl-2-pyrrolidone and ethylene glycol monobutyl ether is 0.75 to 0.95.

8. (Previously Presented) The cleaning method according to claim 7, wherein the component is dipped in the bath of the cleaning solution while the component is stored in a cage with 500 to 100 meshes.

9. (Previously Presented) The cleaning method according to claim 7, wherein the component is dipped in the bath of the cleaning solution while a temperature of the cleaning solution is set at 50 to 80°C.

10. (Previously Presented) The cleaning method according to claim 7, wherein the semiconductor process comprises etching a layer consisting essentially of a silicon oxide on the target substrate by using the process gas.

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11. (Previously Presented) The cleaning method according to claim 7, wherein the cleaning solution further contains an alkali metal concentration of less than 10 ppb.

Claims 12-18 (Cancelled).

19. (Previously Presented) The cleaning solution according to claim 1, wherein the composition comprises 10 ppb or less of an alkali metal.

20. (Previously Presented) The cleaning method according to claim 7, wherein the water concentration is 5 to 20 wt%.

21. (Previously Presented) The cleaning method according to claim 7, wherein the surfactant concentration is 0.1 to 1.0 wt%.

22. (Previously Presented) A cleaning solution for removing a byproduct derived from a decomposed substance of a process gas containing C and F, and deposited on a component in a process chamber of a semiconductor processing apparatus for subjecting a target substrate to a semiconductor process with the process gas, the cleaning solution comprising N-methyl-2-pyrrolidone, ethylene glycol monobutyl ether, a surfactant, and water; and

wherein a total content of the N-methyl-2-pyrrolidone and ethylene glycol monobutyl ether is 80 to 90 wt%, and a ratio of a content of the N-methyl-2-pyrrolidone to the total content of the N-methyl-2-pyrrolidone and ethylene glycol monobutyl ether is 0.75 to 0.95.

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23. (Currently Amended): The cleaning method solution according to claim 21, wherein the surfactant contains fluorine.

24. (New): The cleaning method according to claim 7, wherein the surfactant contains fluorine.

25. (New): The cleaning solution according to claim 22, wherein the water concentration is 5 to 20 wt%.

26. (New): The cleaning solution according to claim 22, wherein the surfactant concentration is 0.1 to 1.0 wt%.

27. (New): The cleaning solution according to claim 22, wherein the solution contains 10 ppb or less of an alkali metal.

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BASIS FOR THE AMENDMENT

Claim 12 has been canceled. The limitations of Claim 12 have been included in Claim 7. Claim 23 has been amended to correct a minor typographical error.

New Claims 24-27 have been added as supported by Claims 23, 3, 4 and 19 as originally filed.

No new matter is believed to have been added by entry of this amendment. Entry and favorable reconsideration are respectfully requested.

Upon entry of this amendment Claims 1, 3, 4, 7-12, and 19-27 will now be active in this application.

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INTERVIEW SUMMARY

Applicants wish to thank Examiner Kornakov for the helpful and courteous discussion with Applicants' Representative on October 17, 2003. During this discussion it was noted that the application may be put in condition for allowance by including the limitations of Claim 12 in Claim 7.